



INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

IGM AND IGG ANTIBODIES TO PHENOLIC GLYCOLIPID-I FROM MYCOBACTERIUM LEPRAE IN LEPROSY: A STUDY AMONG TUBERCULOSIS PATIENTS IN INDONESIA

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Introduction: Mycobacterium tuberculosis (M. tuberculosis) and Mycobacterium leprae (M. leprae) are morphologically, immunologically, and pathologically similar. The incidence of simultaneous tuberculosis (TB) and leprosy is still controversial.

Objective: To detect anti-phenolic glycolipid-I (anti-PGL-I) antibody in sera from TB patients at Dr. Hasan Sadikin Hospital Bandung, West Java, Indonesia.

Methods: We performed a cross-sectional descriptive study with consecutive sampling from 112 TB patients clinically diagnosed by internist from Internal Medicine Department and confirmed through bacteriological, histological, and chest radiograph examinations. The specimens were taken from blood serum of the patient. Furthermore, the anti-PGL-I immunoglobulin (Ig) M and IgG serum level was evaluated by enzyme linked immunosorbent assay.

Results: The mean of anti-PGL-I IgM and IgG serum level in TB patients of this study were 34.17 ± 21.94 pg/ml and 41.44 ± 18.930 with the mean of optical density (OD) value were 0.18 ± 0.05 and 0.26 ± 0.072 , respectively. The seropositivity of anti-PGL-I in TB patients were 27.68% for IgM and 41.96% for IgG. The seropositivity of anti-PGL-I IgM and IgG level based on clinical manifestation of TB in this study from the highest to the lowest were as follows: extrapulmonary TB patients (61.29% and 59.57%), pulmonary TB patients (29.03% and 36.17%), and pulmonary with extrapulmonary TB patients (9.68% and 4.26%), respectively.

Conclusion: Anti-PGL-I antibody in sera from TB patients in Bandung, West Java, Indonesia is high. Furthermore, periodic observations is needed to determine the likelihood of clinical manifestation of leprosy in TB patients.

